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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/287,031	04/06/1999	STEVEN S. SKIENA	8009-7	5772

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EXAMINER

EDOUARD, PATRICK NESTOR

ART UNIT PAPER NUMBER

2626

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/287,031

Applicant(s)

SKIENA ET AL.

Examiner

Patrick N. Edouard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This is in response to the preliminary amendment file 05/18/2000. Claims 21-35 are pending. Claims 1-20 are canceled.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21-25, 28 and 31-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Riskin (5,031,206).

As per claim 21, Riskin teaches a device stored codes executable by a processor for causing the processor to perform method steps to resolve ambiguities in keyboard entries, the method comprising the steps of:

“receiving a stream of digits in a sequence according to a sequence of key selection from said keyboard, each key of said keyboard outputting upon selection a unique digit representing more than one letters” (abstract, figure 2b, col. 5, line 67 to col. 6, line 14, col. 6, lines 27-32);

“matching said stream of digits in sequence of digits in sequence against a look up table of known words” (his word guessing dictionary 42, his forward dictionary 43a and his reverse dictionary 43b, col. 6, lines 32- col. 7, line 12); and

“outputting a known word if there is a match from said matching” (figure 3A, his comparing the input string against the forward dictionary on size S and outputting the matches).

As per claim 22, Riskin teaches further including codes for causing said processor to reconstruct a word if no known word stores in the look up table matches said streams of digits” (col. 10, lines 5-17).

As per claim 23, Riskin teaches the method including codes for causing said processor to select a plurality of words based on probability of occurrence” (col. 20, lines 31-55).

As per claim 24, Riskin teaches retrieving partial matches if there is no match of a known word” (col. 12, line 43 to col. 15, line 20).

“performing affix or suffix analysis on said stream of digits” (col. 12, lines 49-65);

“removing affixes suffixes found to reconstruct a known word” (see example 1, on page 14).

As per claim 25, Riskin teaches further including recursively constructing said string of digits to a proper name if there is no match of a known word” (col. 20, lines 5-62).

As per claim 28, Riskin further teaches outputting one a plurality of known words matched from said look-up table...preceding word” (figure 2b).

4. Claims 31-38 are the same in scope and content as claims 21-25 and therefore are rejected under the same rationale.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 26-27, 29-30 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riskin (5,031,206) in view of Church et al (5,541,836).

As per claim 26, Riskin teaches outputting all known words if more than one known word matches said strings of digits”(col. 6, line 28+)

“choosing one of said matches ” (abstract).

It is noted that Riskin teaches the claimed invention but do not explicitly teach “use the chosen word in a sentence”. However, this feature is well known in the art as evidenced by Church et al who teach in col. 3, lines 48-64, a method for determining that a word/sense pair has a sense which suits a given position in a text. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the matching words as taught by Riskin could have been used in

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a sentence as taught by Church et al because it would provide a system capable of disambiguating the word/sense pair in a given context.

As per claim 27, Riskin teaches reconstructing a plurality of words based on probability of occurrence”(col. 23, lines 31-55- see also Church at col. 6, line 65, his computation of word/sense pair probability table 107);

“choosing words based on proper position” (his table 107);

“editing unknown words to form a sentence”(col. 10, his using categories of meaning to determine suitability of a word/sense pair).

As per claims 29,30 and 39, it is noted that the combination of Riskin with Church does not explicitly teach wherein said look-up table is a listing of non-English characters correlated with predetermined digits string based on phonetic”. However, Examiner takes Official Notice that this feature is well known in the art. Therefore, one having ordinary skill in the art at the invention was made would find it obvious to recognize that the look-up table could be a list of non-English characters because it would make the system more versatile for being capable of recognizing multi-lingual.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick N. Edouard whose telephone number is (571) 272-7603. The examiner can normally be reached on M-TH 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571 272 7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PNE

  
Primary Examiner